

### REMARKS

Claims 1-20 are in this application and are presented for consideration. Claims 1-4, 7, 11 and 15 have been amended, and new claims 17-20 have been added.

The claims have been amended to address the Examiner's objections, incorporate the Examiner's suggestions and to place the application in better form. The claims have also been amended in accordance with the Examiner's indication of allowable subject matter, and to further highlight and more clearly point out the important features of the invention. Applicant thanks the Examiner for the careful reading of this application, for pointing out discrepancies, for providing suggestions, and indicating allowable subject matter.

The independent claims have been rejected as being obvious over US 5,487,002 (Diller et. al.)

This prior art refers to an energy management control system for a vehicle. It is clear that this must be a vehicle having wheels like a car. For example in Diller et. al. in lines 32 and 33 of column 2 losses due to rolling friction, and aerodynamics and hill climbing are discussed. Also from the other parts of the entire disclosure for the person skilled in the art it is clear that Diller et. al. refers to a car and similar vehicles.

This is very important in view of independent claims 1 and 11 which refer to a method used in connection with a submarine. It is very important that the method can be used for a submarine. The method disclosed in Diller et. al. cannot at all be used in connection with boats. For a vehicle like a car it is very easy to calculate speed and mileage. However, for boats this is very difficult, since there are certain influences which cannot be directly measured on the

boat, in particular the drift of the water and wind.

The method or system like it known from Diller et. al. for example uses the speed as a measured parameter. However, as explained, on a boat it is not possible to directly measure the speed. Further, according to Diller et. al., it is intended to calculate the range of the vehicle. As explained for boats, this is not possible in the similar manner because there are influences like water drift acting on the boat. Since these differences between vehicles driving on roads or rails, and ships or boats are known to the person skilled in the art, the person skilled in the art developing systems for boats would never consider prior art known from other vehicles, since it cannot be expected to find a solution for the particular problems in connection with boats. The independent claims 1 and 11 have been amended to further emphasize that the method and/or apparatus is used in/on a submarine. Therefore, the person skilled in the art in our opinion would not regard the prior art known from Diller et. al.

Furthermore, it is applicant's position that Diller et. al. does not disclose a situation-dependent consumption profile, and to calculate on basis of this consumption profile, the residual capacity of the battery after a predefined travel duration. According to Diller et. al. it is possible to store a certain specific trip as a memorized trip. Later it is possible to calculate the remaining range for the limited energy storage based on this memorized trip, this means for this stored certain specific trip. The system will consider special influences of this certain trip, for example hills etc. This means according to Diller et. al., it is not possible to store a consumption profile for a certain driving condition independent from a special trip or route, and to later calculate the remaining battery capacity on basis of such consumption profile.

Diller et. al. is not able to apply a certain driving condition to measured in one trip to a different trip with the same driving condition. As an example, a driving condition such as 60 mph with headlights and AC on could not be applied to a different future trip. According to the present invention it would be possible to calculate the residual capacity for any trip on basis of consumption profiles which were measured independently from the trip for which the calculation shall be done.

Further according to Diller et. al., general driving conditions independent from a certain trip, are stored in the system by the manufacturer and later cannot be changed. An example is travel on level ground at xx speed. However, for the submarine this would be just the problem as discussed in the introductory portion of the description of the present application. This is the problem to be solved by the invention.

Therefore is applicant's position that independent claims 1 and 11, and their dependent claims, are not obvious in view of Diller et. al..

New independent claim 17 has been added to set forth forming a plurality of the reference journeys where each reference journey has a different travel situation. An example of different travel situations could be different speeds through the water (especially relative water speed), or operating a submarine above or below the surface. Claim 17 sets forth separately measuring, and storing the values of, the energy consumption during each of the reference journeys. Claim 17 then indicates that a predefined journey is provided, and this journey can have a plurality of possible travel situations. As an example, during this predefined journey, the submarine can chose to travel at different speeds, and chose to travel above or

below the surface. Claims 17 then sets forth comparing each of the possible travel situations of this predefined journey with the energy consumption of a reference journey matching each of the possible travel situations.

The method of claim 17 is very useful in determining which of the many possible travel situations to use for a predefined journey. Support for this can be found in the specification in the last part of paragraph 10. The method of claim 17 allows an operator to determine if the energy stored on the vehicle prior to the journey would be sufficient for the journey, or if there would be sufficient energy remaining after the journey for additional operations.

Applicant has reviewed Diller et al., and finds no teaching nor suggestion of considering a predefined journey that can have a plurality of possible travel situations. Correspondingly, Diller et al. does not teach comparing each of the possible travel situations with a matching reference journey. Instead Diller et al. describes measuring a memorized trip, and using that memorized trip to determine how many similar future trips are possible with the energy on the vehicle. It appears that in Diller et. al., different travel situations for a predefined trip are not taught nor suggested. It appears that this possibility has not been considered by Diller et al.. Applicant also finds no incentive nor motivation in the prior art which would lead the person of ordinary skill to modify Diller to consider evaluating a plurality of different travel situations for a predefined journey. Therefore it is applicant's position that claim 17 cannot be obvious over Diller et al..

Additional claims have been added to set forth further features of the invention which are also not taught nor suggested in the references. These features are self evident from the

claims themselves and it is applicant's position that these claims therefore further define over the references.

Applicant again thanks the Examiner for indicating allowable subject matter. If the Examiner has any comments or suggestions which would further favorable prosecution of this application, the Examiner is invited to contact applicant's representative by telephone to discuss possible changes.

At this time applicant respectfully requests reconsideration of this application, and based on the above amendments and remarks, respectfully solicits allowance of this application.

Respectfully submitted  
for Applicant,



By: \_\_\_\_\_  
Theobald Dengler  
Registration No. 34,575  
McGLEW AND TUTTLE, P.C.

TD:tf  
71310-8

DATED: April 30, 2007  
BOX 9227 SCARBOROUGH STATION  
SCARBOROUGH, NEW YORK 10510-9227  
(914) 941-5600

SHOULD ANY OTHER FEE BE REQUIRED, THE PATENT AND TRADEMARK OFFICE IS HEREBY REQUESTED TO CHARGE SUCH FEE TO OUR DEPOSIT ACCOUNT 13-0410.